CLAIMS

What is claimed is:

1. A crosspoint switch comprising:

a plurality of input buses, signals on the input buses being driven at low swing;

a plurality of output buses, signals on the output buses being driven at low swing; and

a plurality of crosspoints, each selectively passing a signal from a low swing input bus to a low swing output bus.

2. A crosspoint switch as claimed in claim 1 wherein each crosspoint comprises an amplifier.

3. A crosspoint switch as claimed in claim 2 wherein each crosspoint comprises a low swing driver circuit.

4. A crosspoint switch as claimed in claim 3 wherein the amplifier is a clocked regenerative amplifier.

5. A crosspoint switch as claimed in claim 4 further comprising a timing circuit which controls timing of the crosspoint switch from a clock, the timing circuit including a delay, the timing of which varies in a manner similar to timing variations in the driver circuit.

6. A crosspoint switch as claimed in claim 3 wherein the signals on the input buses and the output buses are differential signals.

7. A crosspoint switch as claimed in claim 6 wherein low swing drivers which drive the input buses and the low swing drivers at the crosspoints are push-pull driver circuits, each of which drives a pair of differential lines, one line driven high while the other line is pulled low.

8. A crosspoint switch as claimed in claim 1 further comprising a plurality of amplifiers which amplify the signals on the output buses, the amplifiers being clocked regenerative amplifiers.

9. A crosspoint switch as claimed in claim 8 wherein the signals on the input buses and the output buses are differential signals.

10. A crosspoint switch comprising:

a plurality of input buses;

a plurality of low swing drivers which drive signals to the input buses, each low swing driver driving a pair of differential lines, one line driven high while the other line is pulled low;

a plurality of output buses;

a plurality of crosspoints, each selectively passing a signal from an input bus to an output bus, each crosspoint comprising an amplifier which amplifies a signal on an input bus and a low swing driver which drives a low swing signal on an output bus; and

a plurality of output amplifiers which sense the signals on the output buses.

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11. A crosspoint switch as claimed in claim 10 further comprising a timing circuit which controls timing of the crosspoint switch from a clock, the timing circuit including a delay, the timing of which varies in a manner similar to timing variations in the driver circuit.

12. A crosspoint switch as claimed in claim 11 wherein the amplifier is a clocked regenerative amplifier.

13. A method of connecting signals from a plurality of input buses to a plurality of output buses comprising:

driving signals on the input buses with a low swing;

at crosspoints between the input buses and output buses sensing signals on the input buses and driving signals on the output buses at low swing; and

sensing the low swing signals on the output buses.

14. A method as claimed in claim 13 wherein the signals are sensed by a clocked regenerative amplifier.

15. A method as claimed in claim 14 further comprising controlling timing of the crosspoint switch from a clock through a timing circuit including a delay, the timing of which varies in a manner similar to timing variations in driver circuits which drive the signals.

16. A method as claimed in claim 13 wherein the signals on the input buses and the output buses are differential signals.

17. A method as claimed in claim 16 wherein the signals on the input buses and the output buses are driven by push-pull driver circuits, each of which drives a pair of differential lines, one line driven high while the other line is pulled low.

18. A method as claimed in claim 13 further comprising amplifying the signals on the output buses in amplifiers, the amplifiers being clocked regenerative amplifiers.

19. A method as claimed in claim 18 wherein the signals on the input buses and the output buses are differential signals.

20. A method of connecting signals from a plurality of input buses to a plurality of output buses comprising:

driving signals on the input buses through a plurality of low swing drivers, each low swing driver driving a pair of differential lines, one line driven high while the other line is pulled low;

at a plurality of crosspoints, sensing signals from the input buses with amplifiers which amplify signals on the input buses, and driving signals on the output buses with low swing drivers; and

sensing the low swing signals on the output buses with output amplifiers.

21. A crosspoint switch comprising:

means for driving a plurality of low swing signals on a plurality of input buses;

a plurality of crosspoint means for sensing signals on the input buses and driving low swing signals on a plurality of output buses.

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